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This research was concerned with the establishment of normative data utilizing the Lynn Questionnaire for the assessment of achievement motivation. The problem was to determine the mean need to achieve score of general students and of women in sport. A composite description of the two sub-samples, including academic major, age, and sport preference, was presented. Five hundred and four female undergraduate students, 40 volleyball players, and 20 volleyball officials participated in the study. The volleyball subjects were all participants in the Third National DGWS Volleyball Championship, 1972, and data were collected from them by mail. Physical education instructors administered the questionnaire to most of the general students; a few completed the tests in their dormitories. Mean achievement motivation scores, range and standard deviation of various sub-sample scores, item responses, and t tests were calculated. The following results were revealed:

- (1) The achievement motivation score, as measured by the Lynn Questionnaire, of general students is 5.466.
- (2) The achievement motivation score of skilled women volleyball players is 5.375.
- (3) The achievement motivation score of rated women volleyball officials is 5.800.
- (4) The achievement motivation scores of general students

and women in sport are higher than two of the six Lynn criterion groups.

Lynn's entrepreneurs scored significantly higher than either group in

the present study. (5) The achievement motivation score of the women

in sport sample is significantly higher than that of general students.

(6) The achievement motivation level of skilled women volleyball players

is lower than that of rated women volleyball officials.

APPROVAL PAGE
ACHIEVEMENT MOTIVATION OF GENERAL
STUDENTS AND SELECTED
WOMEN IN SPORT

by

Norma Jean Anderson

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the Faculty of the Graduate School at
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Approved by

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APPROVAL PAGE

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CHAPTER I

INTRODUCTION

Although a number of studies about achievement motivation have been reported, few have been concerned specifically with participants of sport. Only recently have attempts to study motivational concepts in relation to athletic participation been made; the work that has been done has dealt almost exclusively with males.

It seems highly appropriate at this point in the growth of competitive sport for women, marked by the formulation of the Association of Intercollegiate Athletics for Women and the scheduling of national championships, for example, to study achievement motivations of women athletes. Given that to date there has not been a clearly definable reward system, such as scholarships, athletic careers (professionalism), societal approval and the like, for women who seek athletic involvement, numerous questions remain unanswered as to why these individuals devote their time and energy to competitive sports. Perhaps a person's basic need to achieve, as conceptualized by McClelland, offers clues that will enhance our understanding of women's sport motivations.

As a woman in sport-player, official, and physical educator - the investigator has a keen interest in the exploration of motives of women who engage in organized competitive athletics. An obvious

need exists for thorough study of achievement motivation of women athletes. The data obtained in this study have the potential for contributing to the further study of the structure of athletic motivation.

Statement of the Problem

This research is concerned with the establishment of normative data utilizing the Lynn Questionnaire for the assessment of achievement motivation. It utilizes a direct measure of need to achieve in answering the following questions:

1. What is the achievement motivation score, as measured by the Lynn Questionnaire, of general students?
2. What is the achievement motivation score, as measured by the Lynn Questionnaire, of skilled women volleyball players?
3. What is the achievement motivation score, as measured by the Lynn Questionnaire, of rated women volleyball officials?
4. How do the achievement motivation scores of general students and women in sport compare with Lynn's criterion scores?
5. Is the achievement motivation level of the women in sport different than that of the general students?
6. Is the achievement motivation level of skilled women volleyball players different than that of rated women volleyball officials?

Definitions and/or Explanations of Terms

Specific meanings indicated below are intended for the interpretation of the terms listed:

Motive--"disposition to strive for a certain kind of satisfaction (Atkinson and Feather, 1966, p. 279)."

Achievement motive--"latent disposition which is manifested in overt striving only when the individual perceives performance as instrumental to a sense of personal accomplishment (Atkinson and Feather, 1966, p. 279)."

Motivation--"the activated state of the person which occurs when the cues of a situation arouse the expectancy that performance of an act will lead to incentive for which he has a motive (Atkinson and Feather, 1966, p. 279)."

Achievement motivation (need achievement)--" $f(\text{achievement motive} \times \text{expectancy of an achievement incentive} \times \text{values of achievement incentive})$ (Atkinson and Feather, 1966, p. 279)."

Achievement incentive--"present when person anticipates that his skill and competence in the performance of a task will be evaluated, and that good performance will produce a feeling of pride in accomplishment (Atkinson and Feather, 1966, p. 279)."

Achievement-oriented activity--"activity undertaken by an

individual with the expectation that his performance will be evaluated in terms of some standard of excellence (Atkinson and Feather, 1966, p. 279)."

General student--a college woman enrolled as an undergraduate student in an accredited university; specifically, the University of North Carolina at Greensboro.

Skilled woman volleyball player--participant in the Third National DGWS Volleyball Championship, February 1972.

Rated woman volleyball official--National DGWS volleyball official who officiated at the Third National DGWS Volleyball Championship, February 1972.

Woman in sport--woman who has had a part in organized competitive athletics; specifically, a skilled woman volleyball player or a rated woman volleyball official.

Assumptions

There are opinions, facts and premises underlying this problem which are commonly accepted by the investigator, and are therefore not subject to validation as a part of the study. The following assumptions are fundamental to this research:

1. Motives are learned; they develop out of repeated experiences connected with certain situations and/or behaviors. Achievement motives develop from situations involving

standards of excellence and competition with those standards.

2. Achievement motivation can be measured.
3. The Lynn Questionnaire is a valid measure of achievement motivation.
4. Individuals participating in the study are appropriate representatives of their population sub-samples.

Scope of the Study

Determination of the achievement motivation score as measured by the Lynn Questionnaire of general students, skilled women volleyball players, and rated women volleyball officials, and establishment of normative data utilizing the Lynn Questionnaire comprise the scope of the study. This research is limited by the mail responses of the Lynn Questionnaire and the characteristics of the sample involved in the study. Women were chosen as the university sample for several reasons. First, the sport sample was made up entirely of women. Secondly, the University of North Carolina at Greensboro, while being coeducational, is primarily populated by women students, and it was determined that a sufficient number of men for accurate norms would not be available. Subjects involved are 504 college students currently enrolled in an accredited university, 40 volleyball players, and 20 volleyball officials. Volleyball players and officials are further identified according to par-

ticipation at the Third National DGWS Volleyball Championship,
February 1972

Significance of the Study

Achievement motivation has long been a subject of study of behavioral scientists, but examination of motivational concepts in relation to athletic participation has only recently been undertaken by sports psychologists. The increase of participation by women in competitive sport suggests the validity of studying the achievement motivation of women in sport. Use of the Lynn Questionnaire to measure achievement motivation of women university general students, skilled women volleyball players, and rated women volleyball officials offers the promise of data that may be useful in contributing to the understanding of athletic motivation.

CHAPTER II

REVIEW OF RELATED LITERATURE

In reviewing the related literature, several different areas were researched. To simplify organization of the material gathered, the review is presented in five major categories. The first division deals with literature relating to the nature of achievement motivation. The second consists of material concerning the measurement of achievement motivation. The third category is concerned with why individuals participate in sport. The fourth area summarizes some of the unique aspects of women and sport, and the last area gives evidence of increased participation in sport by women.

Nature of Achievement Motivation

Achievement motivation has been the subject of much study in recent years, but the pioneering efforts and most extensive research have been performed by McClelland and his associates. Atkinson, Feather, and Heckhausen have also contributed in large measure to a theory and understanding of achievement motivation.

Research in achievement motivation has been carried on in two different directions since 1958. The first, directed by McClelland's work, is concerned primarily with the social origins and consequences of the need for achievement. The second seeks to deal with achievement motivation by studying an individual's achievement-oriented

activity. This achievement-oriented activity is made up of actions undertaken with knowledge that the individual's skill and competence will be evaluated in relation to a standard of excellence (Atkinson, Feather, 1966).

The achievement motive is believed to be a latent disposition which becomes overt only when the individual sees his performance as a means to a sense of personal accomplishment. Atkinson (1966, p. 279) defines motivation as "the activated state of the person which occurs when the cues of a situation arouse the expectancy that performance of an act will lead to an incentive for which he has a motive." Therefore, achievement motivation is seen as a multiplicative function of the achievement motive, expectancy of achievement incentive, and the value of the achievement incentive. This incentive is present when a person believes his ability will be evaluated and that a good performance will produce a feeling of pride. The achievement motive is not recognized in lower species.

McClelland (1953) believes motives develop from experiences which are connected with certain types of situations and behaviors. Motives are learned. According to McClelland (1953), the achievement motive is learned in the following manner.

. . . the situation should involve "standards of excellence," presumably imposed on the child by the culture, and the behavior should involve either competition with those standards of excellence or attempts to meet them (p. 275).

Cultures which stress competing with standards of excellence should produce children with high achievement motivation. Origins of achievement motivation lie in the stress placed on independence training by the culture. Individuals with high achievement motivation have been forced to do more things on their own earlier than those with low need achievement. Heckhausen (1967) says that the meaning of success varies significantly with socio-economic background.

Situations which present challenges to achieve must also pose the threat of failure (Atkinson and Feather, 1966). Activity which is achievement-oriented is influenced by a conflict between the two opposite tendencies, to achieve success thereby maximizing satisfaction and to avoid failure or minimize pain. Other extrinsic motivational tendencies may also influence activity.

There are a number of characteristics of the achievement-oriented personality as stated by Atkinson and Feather (1966), Heckhausen (1967), and McClelland (1953). They are as follows:

1. Attracted to activity which requires skill
2. Not interested in activity where outcome depends on chance
3. Is challenged by activities of intermediate difficulty rather than those easier or more difficult
4. Is realistic in that raises sights if successful and lowers goals if fails

5. Enjoys challenges, so will attempt even very easy or very difficult tasks if nothing else is available.
6. Is persistent, but does not waste time trying the impossible
7. Favors quick-moving, concentrated solution process.

Many studies have been done to identify these characteristics.

Persistence and level of aspiration are much-researched areas.

Feather (1963, 1961) has concentrated on studies in persistence. In one study (1961) the Thematic Apperception Test and the Mandler Sarason Test Anxiety Questionnaire were administered to 89 male college students. After being classified as high need achievement-low test anxiety or low need achievement-high test anxiety, four complex reasoning tasks were administered to 34 preselected students. Measures of persistence were obtained on the first and third insoluble tasks. Results confirmed the following four hypotheses:

(1) when motive to achieve success is stronger than motive to avoid failure, an individual should be more persistent at a task when his initial subjective probability of success is greater than .50, than when it is lower than .50, (2) when motive to avoid failure is greater, an individual should be more persistent when his initial probability of success is low than when it is high, (3) when initial probability of success is high, an individual who has higher motive for success should be more persistent than one in whom the motive to avoid

failure is greater, and (4) when initial probability of success is low, an individual who has greater motive to avoid failure than motive for success should be more persistent than one in whom the motive for success is higher.

In yet another persistence study, Feather (1963) tested 60 male subjects for persistence at an insoluble task presented to them as very difficult. A similar task described as of intermediate difficulty was presented as an alternative. It was found that persistence is positively related to initial estimate of probability of success for subjects high in need achievement and low in test anxiety. The probability of success of these subjects rise initially with failure, then falls following repeated failure. Subjects who persisted at the initial task showed a later preference for that task.

Moulton's (1965) study supported Atkinson's risk-taking model stating that individuals low in need achievement and high in fear of failure may raise their level of aspiration following failure and lower it after success.

Heckhausen (1967) made comments regarding level of aspiration. Experience of success and failure is related to the degree of difficulty of the task as seen by the individual rather than to the objective characteristics of the task itself. Success and failure are experienced only within the area of moderate difficulty. There is a

general tendency for an individual to push his own ability to achieve upward. Personal preferences exist for degrees of difficulty or excellence in one's own performance. Failure-oriented personalities are more unrealistic in their career choices than success motivated personalities. The latter have a higher level of aspiration.

Lewis (1968) stated in his book that women were more motivated by need for love and security and less by needs for personal attainment than men. Lack of strong occupational aspiration among women was due to a lower level of aspiration. Women deemed acceptable in society were found to be more sociable, more involved with people, more outgoing and impulsive, more flexible, and more feminine, while less acceptable women had higher intellectual and cultural interests. To arouse need achievement in women, reference to their social acceptability was successful. Needs of women seemed to be strongly related to their cultural background. Girls who achieved best in school were those who identified more closely with women. Females who developed high achievement motivation in relation to intellectual goals had a lower degree of identification with the traditional female sex role.

Learning and skill acquisition are other areas of study. McClelland (1953) stated that in general subjects with higher achievement motivation do better on all sorts of tasks, especially those which permit learning and involve concentration. Atkinson (1958) reported a

study which supported the hypothesis that students who were relatively high in achievement motivation would show greater interest and learning when ability grouped. Lowell (1952) found in studying the effect of need achievement on learning and speed of performance that the achievement motivation score is associated with learning when learning is required, and is associated with speed when it is not.

Sampson (1963), using a projective technique for determining need achievement, placed women in one of two experimental situations. In one situation, conflict was created between subject satisfaction of need achievement by performing well on a learning task and their avoiding activity which was undesirable to them. No conflict was present in the other situation. Results indicated that under the conflict situation, there is no difference between persons high and low in need achievement. Under nonconflict conditions, persons high in need achievement learn quicker than those who are low.

Burton (1971) studied the relationships between state and trait anxiety, achievement motivation, and skill attainment in 212 college women. No relationship was found between need to achieve through one's own efforts and need to be a success which results in emulation of success rather than in hard work. No relationship was found between state anxiety and need to achieve through one's own efforts. There was an inverse relationship between trait anxiety and need to achieve.

Both state and trait anxiety constructs were positively related to need to be a success. No relationship between need to achieve and skill learning in riflery was found, but an inverse relationship with skill learning in bowling was evident.

Performance is related to the strength of the achievement motive. Atkinson and Reitman (1956) state that the relationship of performance to the achievement motive is significantly positive when the expectancy of satisfying it through performance has been aroused and few other expectancies of goal-attainment are aroused. When others are aroused, there is a relationship between the achievement motive and performance.

Pestrué (1971), working with hospitalized patients, found that subjects high in need achievement performed at a higher level than did subjects with low need achievement. Subjects with high need achievement and high self-esteem performed on the highest level while subjects low in need achievement and self-esteem performed on the lowest level.

Risk in relation to achievement motivation has been studied by several researchers. Littig (1963) found in games of chance that subjects with a motive to avoid failure which is stronger than their motive for success will avoid intermediate probability of success. DuCETTE (1969) studied the subjective probability of success. The

results of his study employing 117 college age males indicated that subjects who differ in motive toward success and motive to avoid failure, differ in preferred risk only under conditions of ambiguity. Also, subjects who are high in motive to avoid failure think they will do poorly in a task and feel they have not done well on a task already performed. Motives for success and failure avoidance bias an individual's estimation of his own ability.

Raynor and Smith (1966) studied the relationship of direct and projective measures of the achievement motive to risk taking in games of skill and chance under relaxed and achievement-oriented conditions. The results indicated a strong relationship of both type measures to preference of intermediate risk only in the game of skill. This was true particularly under achievement-oriented conditions.

There are differences in the way men and women react to measurement of achievement motivation. McClelland (1961) determined that while women did not react to references to leadership or intelligence in the Thematic Apperception Test, they were moved with references to social situations. Due to the different expectations in our culture, getting along with others is very important to females, while getting ahead is as important to males. Lesser, Krawitz, and Packard (1963) found that need achievement scores of female achievers increased significantly in response to achievement conditions depicted by pictures of females, but not so when pictures of males were used.

Characteristics of the achievement motive in women were studied by French and Lesser (1964). In order to explain inconsistent experimental results obtained with female subjects, the hypothesis was proposed and confirmed that female subjects would respond to arousal cues with heightened achievement motivation scores and high motivation performance relationships when the cues were related to a goal that was achievement-relevant alone to the subject. It was also found that motivation scores were higher under intellectual arousal when male figures were used, while they were higher under woman's role arousal when female figures were used.

Horner (1969a) discussed the social problems which exist for a bright woman in achievement-oriented situations. She cites Maccoby as suggesting that girls who are motivated to achieve are defying conventions of what girls "should" do. The girls equate intellectual achievement with loss of femininity. Success inhibits social life for the girls, whereas it enhances social life for boys. Therefore, the intellectual woman pays a price in anxiety. Women who do not fear success, however, aspire to graduate degrees and careers, often in scientific areas.

In another study by Horner (1969b), risk-preference and performance of men and women were studied under a competitive and a non-competitive situation. While results concerning risk-preference for men were incomplete, results concerning performance agreed with

those of previous studies. In competitive conditions the tendency of men to perform is generally stronger than in non-competitive situations, thus level of performance is higher. Resultant achievement motivation is positively related to performance under non-competitive situations, but not under competitive conditions. In competitive situations with other men, subjects highly motivated both to achieve and to affiliate showed a decrement in performance. As in past investigations, results for women were inconclusive. An independent measure for the motive to avoid success was developed, however, and when employing this, it was found that 65% of the women were high in fear of success while 8% of the men indicated this. Women who scored high in fear of success performed better in the non-competitive situations.

Measurement of Achievement Motivation

Measurement of the achievement motive has been discussed in some detail by a number of researchers. Several methods of measuring need achievement have been studied, often with conflicting conclusions. There are differences of opinion concerning the adequacy of these methods to measure achievement motivation. Two basic types of measurement are direct and projective.

McClelland and others (1949) discussed three main methods of measuring achievement motivation: (1) asking the subject, directly or indirectly, (2) obtaining judgment by outside observers, (3) recording

certain behavioral signs of motivation. He set up four criteria which should be met by any method which proposes to measure achievement motivation and compared each of the methods with the criteria. They are as follows:

1. "The measure of a motive should sensitively reflect the presence or absence of a motive or its variations in strength (McClelland and others, 1949, p. 9)."
2. "The measure of a motive should reflect variations in only that motive (McClelland and others, 1949, p. 14)."
3. "The measure of a motive should give the same reading for an individual or a group under the same or nearly the same conditions (McClelland and others, 1949, p. 20)."
4. "The measure of a motive should have relational fertility (McClelland and others, 1949, p. 20)."

The third method, behavioral measures, in the main involves content analysis of imaginative thought sequences. In short, fantasy. In comparing the three methods to the criteria, the following results were obtained. Both self-descriptive methods and judgments by others are generally reliable, though the latter is less so. Neither shows much evidence to demonstrate that they vary with the motive being studied, and that motive alone. This problem of multi-determination is compounded when dealing with the judgment of others. This is due to the

fact that the motives of the judges may become involved also. The third method, however, dealing with behavioral signs, shows more promise concerning the criteria of unique variation and of validity. Reliability is harder to satisfy, due to the difficulty of setting up two exactly comparable motivational situations. McClelland notes that since the three methods for measuring achievement motivation yield basically uncorrelated results, it would be wise for researchers to use terminology which will immediately identify which method of measurement is being employed. McClelland's Thematic Apperception Test is one of the best known and most widely used projective type measures of achievement motivation (McClelland, 1953).

A study by McClelland, and others (1949), using the Thematic Apperception Test, was conducted under the following conditions. Approximately 200 college men wrote five-minute stories in response to four slides depicting achievement-related situations. The subjects were under conditions described as relaxed, neutral, failure, and success-failure. These results were obtained. The scoring method could be quickly applied, was sensitive to different conditions, and was objective and reliable. Need achievement scores increased significantly in induced need from relaxed to neutral to failure conditions.

Holmes and Tyler (1968) also discussed direct versus projective measurement in the study of achievement motivation. Though

it has been thought that material measured by projective tests was unconscious, the investigators believed that the Thematic Apperception Test measures conscious material as there is no acceptable evidence to the contrary. Since the Thematic Apperception Test measures need achievement, it was hypothesized that need achievement is conscious and measurable by direct, objective techniques. This study tested the predictive validity of three methods of measuring achievement motivation: (1) Thematic Apperception Test projection, (2) subjects self-reports, and (3) two self-peer ranking measures. The criterion measures of class grades and two laboratory tasks were not related to either scores obtained from the Thematic Apperception Test or self-report scores. Self-peer ranking scores were significantly related with grades. It was concluded that achievement motivation is conscious and subject to direct self-report if the means of responding is made specific.

Heckhausen (1967), though primarily using projective measures, felt it premature to consider questionnaire methods of measurement as basically unsuitable for achievement motivation. Costello (1967) and Lynn (1969) developed direct methods of measuring need achievement. Costello performed a factor analytic study of self-report items designed to measure need achievement. From this, two scales of achievement were developed, one to measure a need to do

well and the other to measure a need for success. The latter was significantly related to anxiety and neuroticism. Lynn also performed a factor analytic study. His results showed most components of achievement motivation loaded on a single factor. Lynn's Questionnaire is composed of eight yes-no questions, highly correlated with McClelland's Thematic Apperception Test. Norms for several groups are given.

Why Individuals Participate in Sport

When questioned as to why individuals participate in sport, a number of responses come to mind. Various persons have offered their thoughts on the subject.

Weiss makes the following statement in regard to women's participation in sport. "Where a young man spends his time redirecting his mind and disciplining his body, she has only the problem of making it function more gracefully and harmoniously than it natively can and does (1969, p. 17)." Metheny quotes Roger Bannister. "Sport is a diversion with no purpose beyond providing a testing ground larger than a chess board but smaller than life itself (1965, p. 164)." Metheny further adds that all recreational activities offer some diversion, some change of activity, this involvement in something different, but sports offer the added incentive of movement. Sport involves the whole person and thus tests the whole person. As Metheny states:

. . . we find out what we can do, and how we react to

success, failure, and uncertainty; and this self-testing forces upon us a kind of self-evaluation in specific terms not often provided by other life situations (1965, p. 164).

Beisser (1967, p. 150) said "sports may represent a place of anachronistic refuge where he can retain his place in the world without facing some of the hazards of mature responsibility." Ogilvie and Tutko (1971) state that today's young athletes engage in sports in search of certain personal esthetic experiences. Blyth (1969, p. 110) quotes figure-skater Mary Lynn Gelderman. "Skating is a way of becoming somebody." Girls enjoy the attention they get by being the best. Janet Wardley-Yarbrough, champion fencer, says of fencing, "At last I was someone special (Blyth, 1969, p. 110)."

Among the many reasons man participates in sport are enjoyment, pleasure, friendship, joy of movement, play, display before others, challenge, money, fame, prestige, accomplishment, fulfillment, and aggression reduction (Coutts, 1968, Beisser, 1967). When one shows preference for a particular activity, it is probably due to the ability of that sport to provide the player with opportunities to fulfill his reasons for engaging in sport. Coutts (1968) states that the sense of freedom which exists in sport is one basic reason for sport participation, both freedom from and freedom for, though this freedom is only a potential.

Sport provides an ideal medium for man to be himself, to actualize his potential. Because sport is a holistic type of experience which requires the dedication and concentration of all man's energies, it provides him with an opportunity to be all he is capable of being. It is this freedom to be that enables man to achieve in sport a sense of fulfillment which may be lacking in other aspects of his life (1968, p. 70).

Beisser lists a unique group of functions of sport which also give clues about why people engage in sport.

1. Provide arena for expression of many physical actions stimulated by the culture but precluded by the rules of everyday life.
2. Opportunity for symbolic or actual repetitive enactment of problem situations for the individual, with the possibility of achieving some mastery . . which allows for a change of roles, activity instead of passivity, and the possibility of victory.
3. Provide for individual continuity of interest at various ages, in a culture filled with ambiguity of role function.
4. Provide a transitional institution between work and play for the individual in his personal development, and for society (1967, p. 237).

Women and Sport

Unique aspects of women's behaviors have been popular topics of study. Reports concerning motivational tendencies and personality traits of women are reviewed in this study.

In studying the motives of collegiate women athletes, Berlin (1971) found that the competitive sport experience contributed to the participants' self regard, offered challenges for the attainment of mastery, and provided opportunity for expression and interaction. A similarity was found between the motives that relate to specific sport situations and those that influence common life behaviors. In a later study, Berlin (1972) determined the stability of the above motivational tendencies by comparing need achievement scores, pre and post season, of women gymnasts.

Malumphy (1968), in studying personality of collegiate women athletes, obtained the following results. Individual sports participants were less anxious than team sports participants, more venturesome and more extraverted than team and team-individual groups, more tough-minded and more "tough poised" than the nonparticipants. They scored higher on leadership than the team, team-individual, and non-participant groups, and more tough-minded than the nonparticipants, but no more so than the other sports groups.

Women's Participation in Sport

Growing interest and increased participation in sport by women is evidenced by the number of related articles found in popular publications as well as professional journals. A large number of authors discuss and verify this increased participation.

Often viewed in a cultural light, sport is sometimes tied in with woman's need to define her role in society, and with women's liberation. DeBacy, Spaeth, and Busch (1970) introduce a discussion of women's sport in this light, citing the appearance of women pilots and women jockeys as examples of women today. They state that competition for girls and women is showing rapid growth. Malumphy (1971) discusses physiological and psychological aspects of women in sports, and says that athletics for women have arrived and are here to stay. Gilbert and Williamson (1973c) state that at Forest Hills and Wimbledon women players draw as many spectators as the men and sometimes more.

In a newspaper article, Smith (1971) quotes Dr. Hally Beth Poindexter. "For many years we had a fun-and-games-oriented program, but now it has become more highly competitive." Spasoff (1971), in recognizing the recent increase in competitive athletics for women, sees a need for more qualified women coaches. Spasoff views the shortage in this area due to the lack of emphasis in the past in women's physical education programs on coaching.

Gilbert and Williamson (1973a) provide evidence to show that females respond when good athletic programs are offered. In Tampa, Florida in 1971, the first year for a slow-pitch girls softball program drew 1,000 girls. Golfer Carol Mann drew 154 girls to a clinic in Baltimore despite the fact that Hurricane Agnes hit the East Coast that week. Doyle Weaver, a boxing coach, organized a boxing program for six to sixteen year old girls and soon attracted 300 girls.

Magnusson (1972) discussed the inception and function of the Association of Intercollegiate Athletics for Women (AIAW), the major governing body for women's intercollegiate athletics. In 1967, the Commission for Intercollegiate Athletics for Women (CIAW) began operation and encouraged organization of groups of colleges and universities to govern intercollegiate competition for women and to sanction closed events. By June 1972, the Commission for Intercollegiate Athletics for Women had sponsored 22 national intercollegiate championships, distributed among seven sports. The Association of Intercollegiate Athletics for Women was organized "when it became apparent that there was a need for a more structured governing body which would provide leadership and initiate and maintain standards of excellence in intercollegiate competition for all college women (p. 71)." Magnusson also states that there has been

tremendous growth of women's athletics in the past five to ten years. While a few years ago it was difficult for a college woman to experience athletic competition through her school, there are now state, regional, and national championships in several sports as well as the usual dual meets. Even past this in scope are possibilities for international competition.

Cheska (1970) also discusses women in international competition. The Olympic Games, Pan American Games, World Student Games, exchange meets, and world zone play-offs are cited as examples of arenas for women in international sport.

Women are taking legal steps in order to more fully participate in athletics. Fasteau (1973) gives a number of examples involving women of all ages. The New Jersey State Division on Civil Rights ruled that girls could participate on Little League teams. The United States Court of Appeals for the Sixth Circuit ruled that girls may not be prevented from full participation in non-contact interscholastic athletics. The Michigan Legislature passed a bill providing for female participation in non-contact sports and allowing them to try-out for a boys' team even if a girls' team exists. New Mexico and New York also have rules which allow girls to try-out for non-contact boys' sport teams if there are no girls' teams. Connecticut, Louisiana, Indiana, Minnesota, Nebraska, and Oklahoma also have provisions for girls to participate extensively in sports.

Summary

Five major areas were reviewed in this chapter. The first dealt with the nature of achievement motivation. The concept of achievement motivation was conceived as a way of describing one type of behavior in which persons compete against standards. Many psychologists have considered need achievement part of the personality structure. Persistence, level of aspiration, learning, performance, and risk were areas of interest to investigators working with achievement motivation. Certain characteristics of the achievement-oriented personality were discerned by various researchers. The achievement-oriented personality was not interested in activity where outcome depends on chance, but was attracted to activity which requires skill. He was challenged by activities of intermediate difficulty and favored a quick-moving solution process. He was realistic, persistent, and enjoyed challenges.

Measurement of achievement motivation, the second category of study, can be obtained by either projective or direct methods. The major projective tool is the Thematic Apperception Test by McClelland. A questionnaire, a direct measure developed by Lynn, correlates highly with McClelland's test.

Why individuals participate in sport was the third area of study. Some of the reasons found were enjoyment, friendship, joy of

movement, display before others, challenge, money, fame, fulfillment, and aggression reduction.

Women and sport studies showed that the competitive sport experience contributed to the participants' self regard, offered challenges, and provided opportunity for expression and interaction.

The fifth topic dealt with women's participation in sport. That women had become more active in sport and more willing to venture into sport areas previously closed to them was clearly indicated. They had become more competitive. Sports programs had grown in number, size, and organization. Women had taken legal steps to more fully participate in athletics, from Little League to high school to professional sports.

CHAPTER III

PROCEDURES

After having decided upon a general area of study, the investigator extensively read the literature in order to specify the problem, identify tentative hypotheses, and develop a research strategy that would appropriately answer underlying questions. Thereafter, the following steps were taken in conducting the inquiry.

Selection of the Instrument

The decision to accept McClelland's concept of achievement motivation as a basic frame of reference led to a study of both projective and direct methods of measuring need achievement. After due consideration, Lynn's Questionnaire, a direct measure, was chosen. The rationale for this choice is as follows: The Lynn Questionnaire measures McClelland's concept of achievement motivation (Lynn, 1969). The instrument has accurately discriminated known groups of high achievers from others. The Lynn Questionnaire is uncontaminated by neuroticism, extroversion, and most of Cattell's 16 personality factors. The Lynn Questionnaire is administratively feasible. It requires only a simple yes-no response to eight questions. It is easily scored; one point is designated for an achievement-oriented response. The instrument as used in this research is appended.

Because the questionnaire was designed for British subjects, a few words were changed to convey Lynn's intended meaning to the American subjects. For example, "holiday" was changed to read "vacation." The adaptations made were suggested by Dr. Glyn Roberts, and had been previously employed successfully by him.

Selection of the Sample

Women in sport sample. Because the investigator has a great interest in women's sports, volleyball in particular, volleyball players and officials were chosen to make up the women in sport sample to be studied. In order to obtain highly skilled players and officials, the teams who placed first through eighth in The Third National DGWS Volleyball Championships and the officials who officiated at the same tournament were invited to participate in the study. Teams from The University of California at Los Angeles, California State University at Long Beach, San Fernando Valley State University, The University of California at Santa Barbara, Sul Ross State University, Michigan State University, Southwest Missouri State University, and The University of Houston were contacted. The third, seventh, and eighth place teams did not participate in the research (San Fernando Valley State University, Southwest Missouri State University, and The University of Houston). Thus, five teams of players comprise the women in sport sample, along with 20 of the 24 rated officials who

cooperated in the investigation.

General student sample. Since the Lynn Questionnaire was designed for British subjects, the norms available were derived from scores made by British subjects. It was deemed necessary to determine norms for American subjects in order to have an appropriate measure with which to compare the achievement motivation scores of the women sport sample. General students were chosen to establish a baseline measure for the Lynn Questionnaire. Specifically, 504 freshmen, sophomore, junior and senior female students at the University of North Carolina at Greensboro were chosen to establish normative data for American college students.

Development of Data Sheets and Printing Materials

A biographical data sheet was developed for the sport sample to complete, as well as a less-detailed version for the general college sample. The forms were designed to allow future comparison between the sport sample and American norms. See copies in the Appendix. Upon completion of both data sheets and modifications of selected words in the Lynn Questionnaire, copies of each were printed for distribution.

Administration of Questionnaire

General student sample. A number of instructors in the required physical education program at the University of North Carolina

at Greensboro were contacted by the investigator to enlist their co-operation in this study. Each one was asked to administer the Lynn Questionnaire, with biographical data sheet attached, to their respective classes. When permissions were obtained, a sufficient number of copies of the instrument along with instructions for respondents were given each instructor to be administered at his convenience. Students were to be informed that completion of the instrument was optional, data was to be used in setting norms as part of a thesis, and all eight questions had to be answered. Questionnaires and data sheets were returned to the investigator upon completion.

Forms were also distributed in Winfield Hall, with instructions to return completed forms to a given location in Weil Hall. There they were collected by the investigator.

Women in Sport Sample. Letters were mailed to the coaches of the eight eligible teams, briefly explaining the study and what would be required of the teams if they agreed to participate. A self-addressed, stamped response card was enclosed on which the coach was to indicate whether or not they would be a part of the study and by what date they needed to receive the material. Upon receipt of positive response cards from five of the schools, data sheets and questionnaires with instructions identical to those utilized in obtaining data from the general college sample were mailed to each coach. Completed data were

returned in a self-addressed, stamped envelope sent with the testing materials. Two teams that indicated they would participate in the study did not return the data. One team did not respond at all.

A questionnaire, data sheet, and letter explaining the study were sent to each of the 24 officials who served as either referee or umpire in the Third National DGWS Volleyball Championships. Addresses of the officials were obtained from the head official of the tournament. Twenty forms were returned in the stamped envelope provided by the investigator.

Scoring and Analysis

Questionnaires were scored by the investigator as they were returned. One point was scored for each achievement-oriented response, so a minimum of zero and a maximum of eight was the range of possible scores. This marking scheme was proposed by Lynn (1969). A tally was also kept of scores on the Lynn Questionnaire according to major field of study as determined from the data sheet. After scoring was completed, tests in each group were arranged according to score, and transferred to a master tally sheet. By adding individual achievement motivation scores as determined by the Lynn Questionnaire and dividing by the number of subjects in each group, a mean achievement motivation score for players and officials who made up the women in sport sample was obtained. The general

student mean for achievement motivation was then determined by the same procedure. The range and standard deviation for each sub-sample were also ascertained.

A t test was run between general students and women in sport to determine if the differences between means was significant or was due to chance.

Academic majors of both general students and players were identified from data collected on the biographical forms. Lynn achievement scores according to major were figured for each curriculum area.

An item tally of all subjects' responses was performed. Numbers and percentages of answers of general students and women in sport subjects are presented in Table 5.

A description was developed of the officials and players employing information gathered from the biographical data sheets. Subjects' achievement motivation scores and Lynn criterion group scores were then compared. A t test between Lynn's entrepreneurs, a criterion group, and the women in sport sample revealed a significant difference at .01. Lynn's criterion scores were higher. Finally, utilizing data obtained by Berlin (1973, 1972), comparisons were made with other sportswomen.

Summary

After having read the literature in order to specify the problem, the investigator chose the Lynn Questionnaire to measure achievement motivation. Players and officials who participated in the Third National DGWS Volleyball Championships were asked to serve as the women sport sample, and female students enrolled at the University of North Carolina at Greensboro were selected to serve as the general student sample. Biographical data sheets were developed, the questionnaire adapted, and copies made of each. After permission was gained from appropriate authorities, tests were given to university students, players, and officials. Completed forms were returned to the investigator and then scored. The mean score, range, and standard deviation of each group on the questionnaire were determined. A *t* test was run between general students and women in sport to determine significance in difference between means. Responses to each question of the Lynn Questionnaire were tallied by item, and a record of score and respondents' major field of study was identified. A description was given of players and officials. Comparisons in achievement motivation were made between subjects in this study and Lynn's criterion groups, and among subjects participating in the present study and other sport groups. Results were then analyzed and the data reported.

CHAPTER IV

DATA AND ANALYSIS

The analysis of the data in this study deals with Lynn achievement scores obtained for two sub-samples: general student sample and the women in sport sample. A number of processes and procedures were applied to the data.

Mean Achievement Motivation Scores

Achievement motivation scores were determined for each subject. Then, means for two major groups, general students and women in sport, were calculated: (1) general students, 5.466, and (2) women in sport, 5.517. See Table 1.

Further analysis of need to achieve scores was undertaken within sub-samples. Table 2 identifies upperclass general students (N=74) as having a mean score of 5.649 compared with underclass (N=430) students' 5.435. Volleyball players' (N=40) mean need to achieve score was 5.375. The obtained mean for officials (N=20) was 5.800.

The range of scores for each group was also identified. General student scores spanned the entire range, 1-8. In the women in sport sample, officials' achievement motivation means were less dispersed than players' means.

TABLE 1

Mean Achievement Motivation, Standard Deviation, and Range
for General Students and Women in Sport

Subjects	Mean	Standard Deviation	Range
General students (N=504)	5.466	1.46	1-8
Women in sport (N=60)	5.517	1.52	1-8

TABLE 2

Mean Achievement Motivation, Standard Deviation,
and Range for Sub-samples

Subjects	Mean	Standard Deviation	Range
General students			
Underclass	5.435	1.43	1-8
Upperclass	5.649	1.59	1-8
Women in sport			
Players	5.375	1.46	1-7
Officials	5.800	1.64	3-8

A t test was run between Lynn means for general students and women in sport. A significant difference was found at the .05 level, suggesting heterogeneity in achievement motivation between general students and sportswomen. The women in sport scored significantly higher in need achievement than did the general college students. See Table 3.

Academic Majors and Achievement Motivation Scores

By referring to the biographical data sheets, academic majors were organized in ten categories: (1) health, physical education, recreation, (2) education, other, (3) professional, (4) physical and natural science, (5) social and behavioral science, (6) humanities, (7) arts, (8) home economics, (9) undetermined, and (10) other. For each curriculum area Lynn scores were compared. The highest achievement motivation, 6.0, was ascertained for the players studying physical and natural science. The lowest mean was a 3.0 among those with undetermined majors. General students majoring in physical and natural science scored highest with a 5.867, while social and behavioral science was the category with the lowest score, 4.912. See Table 4.

Item Responses

Responses to the Lynn Questionnaire were item-analyzed. Table 5 indicates the frequency and percentage of achievement-oriented responses for each question. An achievement-oriented answer is a

TABLE 3

Differences Between Means of General
Students and Women in Sport

Comparison	Obtained Value	Tabled Values	
		.05	.01
General students and Women in sport	1.82*	1.645	2.326

*--Significant at .05 level.

TABLE 4

Academic Majors and Achievement Motivation Scores

Academic Major	General Students	Volleyball Players
Health, Physical Education, and Recreation	5.125 (16)*	5.741 (27)
Education, other	5.556 (144)	4.000 (1)
Professional	5.476 (82)	5.500 (2)
Physical and Natural Science	5.867 (45)	6.000 (3)
Social and Behavioral Science	4.912 (34)	5.000 (1)
Humanities	5.636 (66)	5.000 (2)
Arts	5.280 (25)	-----
Home Economics	5.390 (59)	-----
Undetermined	5.333 (21)	3.000 (4)
Other	4.917 (12)	-----

*--Number in parentheses represents sub-sample size.

TABLE 5

Number and Percentage of Achievement-Oriented Responses
to Each Question of the Lynn Questionnaire for
General Students and Women in Sport Sample

Question Number	Essence of Question	General Students*		Women in Sport**	
		#	%	#	%
1	Easy to relax	146	29	11	18
2	Punctuality	416	90	45	75
3	Dislike of waste	459	98	38	63
4	Enjoy getting drunk	394	78	43	72
5	Easy to forget about work	336	67	26	43
6	Preference for congeniality over competence	300	60	40	67
7	Anger toward inefficiency	391	78	41	68
8	Worked to be the best	309	61	43	72

*---N=504

**--N=60

response which, according to Lynn, received one point on the test score. Question 1, which deals with ability to relax, consistently received the fewest achievement-oriented responses. Questions 5 and 6 also received relatively few achievement-oriented responses. Two and 4 had consistently high frequencies of achievement-oriented answers. Question 3 received many achievement-oriented responses for the general student sample, while question 8 was answered in an achievement-oriented manner by many women in sport.

Composite Description of the Women in Sport

Information gathered from the biographical data sheets allowed the investigator to develop a composite description of the women in sport sample. Officials were found to be an average age of 32 years, 1 month, and to have had officiated an average of 10 years, 9 months. All were employed as physical educators. Thirteen taught in public secondary schools, five in college, and two were graduate students in physical education. Sixteen of the officials played competitive volleyball in addition to officiating. They also participated in other sports and officiated in other sports. The preferred sport for 11 of the officials was volleyball; other team sports were preferred by 6. The second preference was strongly for team sports.

The players averaged 21 years of age and had been playing for 4 years, 8 months. Twenty-seven of the 40 competitors were

physical education majors. Only four had not determined their major fields of study. Three of the players were majoring in physical and natural sciences. Thirty-five players considered volleyball their favorite sport, while the remaining five chose it as their second favorite. Nineteen players chose an individual sport as their second preference.

Comparison with Lynn Scores

Achievement motivation scores of the general student sample, 5.466, and the women in sport sample, 5.517, were compared with Lynn's criterion groups. The groups tested by Lynn were made up of British male subjects. Lynn's groups scored as follows: average managers, 6.20, senior managers, 5.91, entrepreneurs, 6.82, naval officers, 4.51, professors, 6.54, university students, 4.82. Table 6 shows that subjects in the present study had higher achievement motivation scores than naval officers and university students. The women in sport sample scored only .39 less than senior managers. The highest criterion group, entrepreneurs, scored 1.3 higher than did the women in sport sample. A t test was run between these two groups, revealing a significant difference between them. The entrepreneurs had significantly higher achievement motivation scores than did the women in sport sample. See Table 7.

TABLE 6

Scores of General Students, Women in Sport
and Criterion Groups on the Lynn Questionnaire*

Group	N	Mean	Standard Deviation
<u>Lynn's findings</u>			
Average managers	258	6.20	1.58
Senior managers	45	5.91	1.11
Entrepreneurs	40	6.82	1.58
Naval officers	80	4.51	1.40
Professors	28	6.54	1.46
University students	200	4.82	1.56
<u>Present study</u>			
Women university general students	504	5.47	1.46
Women in sport	60	5.52	1.52

*--Lynn's data pertain to British subjects.

Comparison of Sample Scores with Scores of Other Sport Participants

The general student sample, 5,456, and women in sport sample, 5,517, were compared with other available achievement motivation scores of sport groups. Achievement motivation scores were reported by Berlin (1972, 1974) for 29 women highly skilled athletes, 5,755, and 5,517.

TABLE 7

Differences Between Means of Entrepreneurs and Women in Sport

Comparison	Obtained Value	Tabled Values	
		.05	.01
Entrepreneurs and Women in sport	20.0*	1.662	2.366

*--Significant at .01 level.

achievement scores of sport groups. Achievement motivation scores were reported by Berlin (1972, 1974) for 29 women highly skilled athletes, 5,755, and 5,517. To determine significant difference between groups, t tests were run. Results showed the difference was significant (p < .05) for the general student sample and the women in sport sample. The range of scores for the athletes was 15.0 to 25.0. The range of scores for the general student sample was 10.0 to 30.0. The range of scores for the women in sport sample was 10.0 to 30.0. Achievement motivation scores were reported by Berlin (1972, 1974) for 29 women highly skilled athletes, 5,755, and 5,517. To determine significant difference between groups, t tests were run. Results showed the difference was significant (p < .05) for the general student sample and the women in sport sample. The range of scores for the athletes was 15.0 to 25.0. The range of scores for the general student sample was 10.0 to 30.0. The range of scores for the women in sport sample was 10.0 to 30.0.

An ANOVA analysis was made of the Lynn Questionnaire. Data

Comparison of Sample Scores with Scores of Other Sport Participants

The general student sample, 5.466, and women in sport sample, 5.517, were compared with other available achievement motivation scores of sport groups. Achievement motivation scores were reported by Berlin (1972, 1973) for 29 women highly skilled gymnasts, 5.758, and 71 women tennis players, 5.617. These data were also derived from the Lynn Questionnaire. Table 8 reveals that skilled gymnasts score highest in achievement motivation. Tennis players are second highest, and the women in sport sample in the present study have the lowest scores among sport groups. However, the mean score for general students is lowest among all groups compared.

Summary

Achievement motivation scores were determined for two groups of women: general students and women in sport sample, made up of volleyball players and officials. The range of scores and standard deviations were also specified. Achievement motivation scores were tallied according to academic majors. To determine significance of difference between groups, t tests were run. Results showed the sportswomen scored significantly higher (.05) than did the general students on achievement motivation.

An item analysis was made of the Lynn Questionnaire. Data

TABLE 8

Lynn Scores for General Students
and Various Sport Groups

Group	N	Mean
<hr/>		
General students	504	5.466
Women in sport	60	5.517
Women gymnasts*	29	5.758
Women tennis players*	71	5.619

*--In ongoing research by Berlin of selected women athletes, Lynn scores were obtained for collegiate gymnastics and tennis squads. Although these scores are not available in published research, the representative means for these groups do provide a basis for comparing need to achieve in these groups of athletes as well as those participating in this study.

showing the number and percentage of persons in each group who answered individual items of the Lynn Questionnaire in an achievement-oriented manner were tabled. A composite description was developed of the women in sport sample from the biographical data sheets. Comparisons were then made among the general student sample, women in sport sample, and Lynn's criterion groups. A *t* test was run between Lynn's entrepreneurs and the women in sport sample. Entrepreneurs were shown to have significantly higher achievement motivation scores than did the sport sample. Finally, achievement motivation scores of two other sport groups, female tennis players and gymnasts, were also compared with the general students and the women in sport sample.

CHAPTER V

DISCUSSION, SUMMARY, AND CONCLUSIONS

Discussion

Given that sport has been considered to be the "domain" of males and that sportswomen have had, until recently, relatively few role models, the comparatively high Lynn score suggests a rather important connection between sport involvement and need to achieve. Women in sport have often found themselves in the position of a female attempting to gain entrance into a culturally male activity (Zoble, 1972). A woman who ventures into competitive sports must be a brave soul, a highly motivated person, and willing to withstand the accusations of behaving atypically. Though there are a few "successful" women in sport, these sportswomen are generally participants of "accepted" sports for women; i.e., tennis, golf. Women who choose to engage in track and field or team sports must feel a strong need to achieve. The findings of the present study bear this out and suggest further commentary. Following are specific remarks which seem to be indicated by the data and a summary of the research. Finally, conclusions are offered which take the form of answers to questions posed in Chapter 1.

Comparison of Mean Achievement Motivation Scores

Between General Students and Women in Sport

The finding that women in sport (players and officials) have a higher need to achieve score than general university students prompts consideration of several points.

Role of sport. One may infer that participation in sports is an activity that contributes to the sportswomans' desire and/or ambition to succeed. Sport, by virtue of its inherent competitive connotations, presents an excellent opportunity for the pursuit of success; i. e., winning, playing well. Participation in sport can be very gratifying and satisfying, as it offers challenges as well as possibilities for success. This adds to its attractiveness to the achievement-oriented personality. Sports serve as an outlet--as a viable opportunity to achieve success. Although there may be other achievement-oriented experiences available to women, the significantly high Lynn score establishes athletic involvement beyond any measure of doubt as an achievement-related activity.

Individual differences. The higher achievement motivation score of women in sport compared to that of the general student sample was obtained in spite of the fact that one of the teams of players had a very low mean score (4.143) and a high standard deviation (2.03) for its seven team members. The consistency of a low

need to achieve among players on this team was identified by examining the curriculum areas of these same players. It is no surprise that three of the seven team members reported that their major field of study was undetermined. Competitive sport participation notwithstanding, this suggests a possible lack to direction or drive among these subjects. One more player on another team had not determined her academic field of study. In all, then, four individuals had a mean achievement motivation score of 3.000 which was reflected in the total women in sport mean.

Because there were only 40 subjects in the player sub-sample, these individual differences may have unduly affected the mean achievement motivation score of the volleyball players. This explains, in part, why the players' mean need to achieve score was lower than that of other students.

Age and Achievement Motivation

In both sub-samples, older respondents had higher need achievement scores. Upperclass students (5.649) were high in comparison to freshmen and sophomores (5.435). Officials (5.800) were high in comparison to players (5.375). This suggests some possible relationship between age and need to achieve.

That upperclass students scored higher than underclass individuals could be due to the fact that less highly motivated students

had already discontinued college by the time they would have reached the upperclass group. This would leave only individuals who had the perserverance and desire for success to finish school. These are achievement motivated people.

The score of the officials could have been higher than the players due to the exceptionally low score of one team. However, the higher score was probably due to the fact that the officials are considered to be established, proven, and, in fact, successful group of people; they are all college graduates, have more than 10 years of officiating experience, are gainfully employed, and officiated at a national tournament where only the best are invited to participate.

Curriculum Areas

College women with interest in the natural and physical sciences (5.867) clearly reflect a high need to achieve. These are subject areas traditionally considered to be men's fields; women in these areas could be thought of as either highly motivated and/or highly competitive. The correspondingly low value obtained for those majoring in the social and behavioral sciences (4.912) is frequently associated with the humanists and service fields, which do not demand exactness and rigor one finds in the pure sciences. Most interesting is the Lynn score for health, physical education, and recreation majors (5.512).

Volleyball players whose major field of study was health, physical education, or recreation scored (5.74), while general students who elected this field of study had a lower average score (5.125). Obviously one cannot assume a high propensity toward competitiveness in all students electing this curriculum.

Item Responses

In terms of the ideas one associates with high need to achieve individuals, the results reveal that punctuality is a factor of general meaning and importance to the women who participated in this study. General students react more to dislike of waste than do women in sport. That women in sport scored comparatively high on the question dealing with trying to be the best is understandable, given the emphasis placed on winning at high level competition and the techniques of officiating. The latter are geared to encourage a good performance from both players and officials in order to achieve success. The data clearly reveal that of all the achievement-oriented motives stated by Lynn, a large majority of the women who were subjects in this research find it easy to relax completely when on vacation--a negatively achievement-oriented response.

Composite Description

Although it is difficult to comment about the comparisons with British males used in Lynn's investigation, one or two remarks seem appropriate. First, 1972 United States women university

students are obviously more achievement-oriented than 1969 British male university students. Their respective scores were 5.46 and 4.82. Secondly, the changing roles of women in the United States may explain why both women in sport and general students score higher on Lynn's Questionnaire than two of the British criterion groups; the criterion groups are known high achievers. As women become more outgoing and more avenues for success outside the home are opened to them, more opportunities for achievement may be realized. As sport participation becomes more acceptable for and to women--as managerial positions become more acceptable for and to women, a change will most likely occur in the attitudes of women toward success in such endeavors. New roles and new motives may be learned. As the women's movement gains still greater prominence, if it does, one may speculate that achievement will be even more visible in the United States sample than the present study reveals.

Comparison of Women in Sport with Other Sport Groups

The women in sport sample (5.517), a team-oriented group, scored lower than Berlin's tennis (5.619) or gymnastics (5.758) groups. This was predictable as Malumphy (1968) found that participants in individual sports were more extraverted and had more leadership qualities than did team sport participants. Both extraversion and leadership are characteristics of achievement motivated people. One of the confounding issues in making across-sport comparisons is the multiple participation of many women in sport activities.

Summary

This study was concerned with the establishment of normative data utilizing the Lynn Questionnaire for the assessment of achievement motivation.

After thorough review of achievement motivation measuring devices, the investigator decided to use the Lynn Questionnaire. The instrument had accurately discriminated between groups of high and low achievers as identified by McClelland. It was administratively feasible.

Because the investigator had a keen interest in volleyball, women players and officials who had participated at the Third National DGWS Volleyball Championships were chosen as the women sport sample. Specifically, all officials were invited to participate; 20 responded. The first eight place teams were asked to participate. However, only the first, second, fourth, fifth, and sixth place teams were involved in the study.

The Lynn Questionnaire was originally designed for British subjects, therefore, only British norms were available. Women university general students were chosen to establish an American "baseline criterion" for the Lynn Questionnaire. Freshman, sophomore, junior and senior female students at the University of North Carolina at Greensboro provided responses which established normative data for American southern college students.

Biographical data sheets for the women in sport sample and the general student sample were developed for use with the questionnaire. After permission was obtained from volleyball coaches and from physical education instructors at the University of North Carolina at Greensboro, questionnaires were distributed for administration and then returned to the investigator. The coaches and officials received the data sheets and questionnaires by mail and returned them in the same manner. Forms were also distributed in an upperclass dormitory at the University of North Carolina at Greensboro, and when completed were also returned to the investigator.

Questionnaires were scored by the investigator as they were returned. By averaging scores for each group, a mean achievement motivation value was obtained. The range and standard deviation of each group were also figured. Differences between the general student group and women in sport group were tested for significance of difference. A t test revealed a significantly higher achievement motivation score for women in sport.

Mean achievement motivation scores were determined for various scholastic majors of general students and volleyball players. The questionnaire was tallied by item.

From information gathered from the biographical data sheets, descriptions of the volleyball players and the officials were presented.

A comparison was made between achievement motivation scores of the subjects of this study and Lynn's criterion groups. A t test was run between Lynn's entrepreneurs and the women in sport sample, showing Lynn's entrepreneurs significantly higher in achievement motivation than the women in sport sample. A comparison was also made between general students, women in sport, and scores of other female sport participants; specifically, women gymnasts and tennis players.

Conclusions

The results presented are drawn from the obtained data and seek to answer the questions raised by the researcher at the outset of the study.

1. What is the achievement motivation score, as measured by the Lynn Questionnaire, of general students?

The achievement motivation score of general students is 5.466.

2. What is the achievement motivation score, as measured by the Lynn Questionnaire, of skilled women volleyball players?

The achievement motivation score of skilled women volleyball players is 5.375.

3. What is the achievement motivation score, as measured by the Lynn Questionnaire, of rated women volleyball

officials?

The achievement motivation score of rated women volleyball officials is 5.800.

4. How do the achievement motivation scores of general students and women in sport compare with Lynn's criterion scores?

The achievement motivation scores of general students and women in sport are higher than two of the six Lynn criterion groups. Lynn's entrepreneurs scored significantly higher than either group in this study.

5. Is the achievement motivation level of the women in sport different than that of the general students?

The achievement motivation score of the women in sport sample is significantly higher than that of the general students.

6. Is the achievement motivation level of skilled women volleyball players different than that of rated women volleyball officials?

The achievement motivation level of skilled women volleyball players is lower than that of rated women volleyball officials.

For a person interested in the growing competitive sport picture for women, this research raises several questions. How does the achievement motivation of volleyball players relate to individuals who pursue other team sports? Is there any difference across sport groups, individual-dual sport performers and those who elect team activities in their college years? Perhaps another question is indicated by the research. Is involvement in multiple sports a factor which would make the above questions unanswerable?

There is little doubt that the present day scene in college athletics is currently undergoing considerable change. At this period of time, numerous critical decisions are being made about athletic programs in institutions of higher education. If such decisions could be based on knowledge and understanding rather than tradition or speculation, there might be more rewarding and educationally sound programs of athletics for women. The present study illustrates the application of systematic research to sport in higher education. Hopefully, many more studies will be undertaken.

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Name: _____

Answer either yes or no, whichever most appropriately represents your response, to each of the following questions. You must make a choice.

1. Do you find it easy to relax completely when you are on vacation? ☐ Yes ☐ No
2. Do you feel annoyed when people are not punctual for appointments? ☐ Yes ☐ No
3. Do you dislike seeing things wasted? ☐ Yes ☐ No
4. Do you like getting drunk? ☐ Yes ☐ No
5. Do you find it easy to forget about your work outside of regular working hours? ☐ Yes ☐ No
6. Would you prefer to work with a congenial but incompetent partner, rather than with a difficult but highly competent one? ☐ Yes ☐ No
7. Does inefficiency make you angry? ☐ Yes ☐ No
8. Have you always worked hard in order to be the best in your own field? ☐ Yes ☐ No

APPENDIX

Name: _____

Directions: Answer either yes or no, whichever most appropriately represents your response, to each of the following questions. You must make a choice.

1. Do you find it easy to relax completely when you are on vacation? ☐ Yes ☐ No
2. Do you feel annoyed when people are not punctual for appointments? ☐ Yes ☐ No
3. Do you dislike seeing things wasted? ☐ Yes ☐ No
4. Do you like getting drunk? ☐ Yes ☐ No
5. Do you find it easy to forget about your work outside of regular working hours? ☐ Yes ☐ No
6. Would you prefer to work with a congenial but incompetent partner, rather than with a difficult but highly competent one? ☐ Yes ☐ No
7. Does inefficiency make you angry? ☐ Yes ☐ No
8. Have you always worked hard in order to be the best in your own field? ☐ Yes ☐ No

ANSWER SHEET

1. No
2. Yes
3. Yes
4. No Years Months
5. No
6. No Male Female
7. Yes Fr. Soph. Jr. Sr.
8. Yes
- Field of study: Major
- Minor
- Favorite active recreational sport (if any)
- Favorite recreational pastime, i.e., bridge, reading, etc.

BIOGRAPHICAL DATA SHEET

The purpose of this questionnaire is to gather background information for use in this investigation. Write answers that best describe your situation in the space provided.

1. Name: _____
(At Third National DOWS Volleyball Championship)
2. Home address: _____
Name: _____
3. Age: _____
Years Months
4. Sex: Male _____ Female _____
5. Class: Fr. _____ Soph. _____ Jr. _____ Sr. _____
6. Field of study: Major _____
Minor _____
7. Favorite active recreational sport (if any): _____
8. Favorite recreational pastime, i.e., bridge, reading, etc.:
Second favorite? _____
Third favorite? _____

FOR OFFICIALS ONLY:

9. Have you ever been a competitive volleyball player? _____
10. Are you now an active volleyball player? _____
11. Do you play other sports now? _____
What are they? _____
12. Do you officiate any other sports? _____
What are they? _____

BIOGRAPHICAL DATA SHEET

Instructions: The purpose of this questionnaire is to gather background information about individuals who take part in this investigation. Write answers that best describe your situation in the space provided.

____ Player
Official (At Third National DGWS Volleyball Championship)

1. Name: _____
2. Home address: _____
3. College (if student): _____
4. Class: Fr. _____ Soph. _____ Jr. _____ Sr. _____

OR

- 3-4. Where employed: _____
 place position
5. Age: _____
 years months
6. At what age were you first introduced to (playing; officiating) competitive volleyball? (If player at Nationals, answer years playing; if official, answer years officiating).
7. What is your preferred sport? _____
Second favorite? _____
Third favorite? _____

FOR OFFICIALS ONLY:

8. Have you ever been a competitive volleyball player? _____
9. Are you now an active volleyball player? _____
10. Do you play other sports now? _____
What are they? _____
11. Do you officiate any other sports? _____
What are they? _____